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(56) Documents cited

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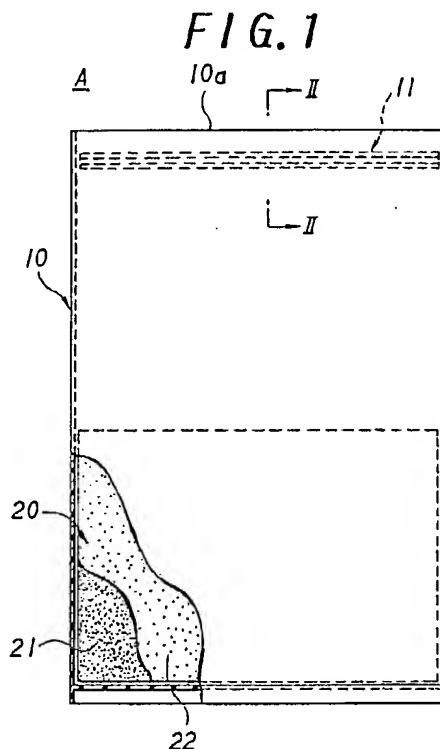
(58) Field of search

A4N

Selected US specifications from IPC sub-classes A47K
A61G

(54) Portable device for disposing of
water retaining excreta

(57) A portable device A for disposing of water retaining excreta comprises a water impermeable sheet bag 10 and a water fixing material 20 previously housed within said sheet bag. The water fixing material 20 includes a water absorbent 21 capable of absorbing and fixing water of the water retaining excreta. The portable device A may be compactly folded with thin form when carried by the user. Preferably, two of the portable devices A are carried in a closable bag which is itself folded in half to form a compact assembly. The portable device A may be thrown away after use.



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FIG. 1

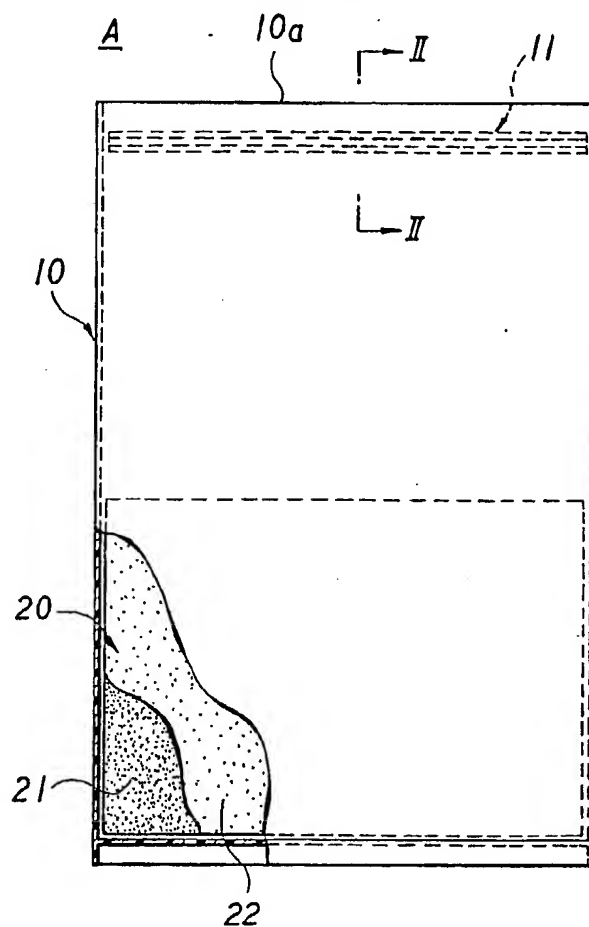


FIG. 2

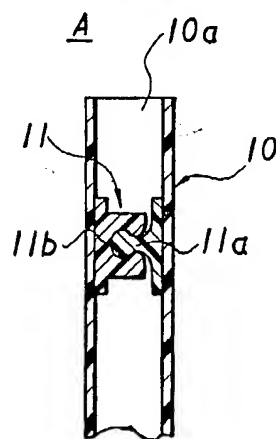


FIG. 3

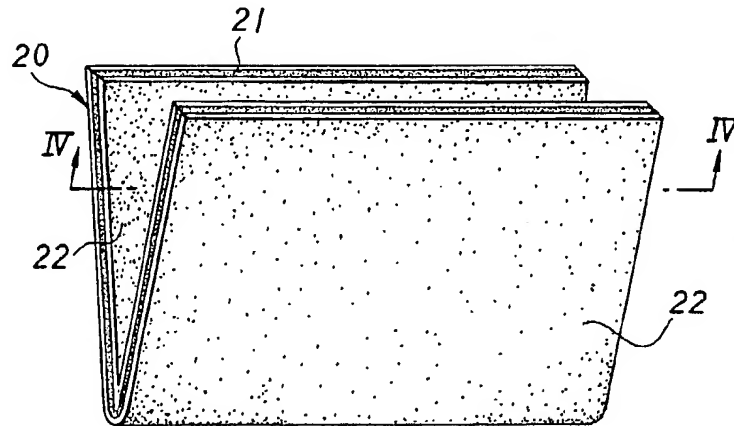


FIG. 4

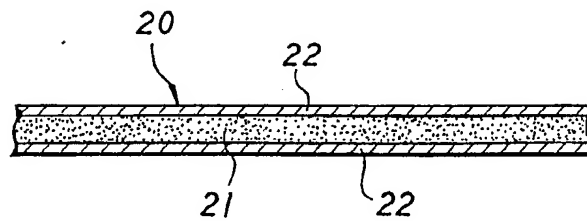


FIG. 5

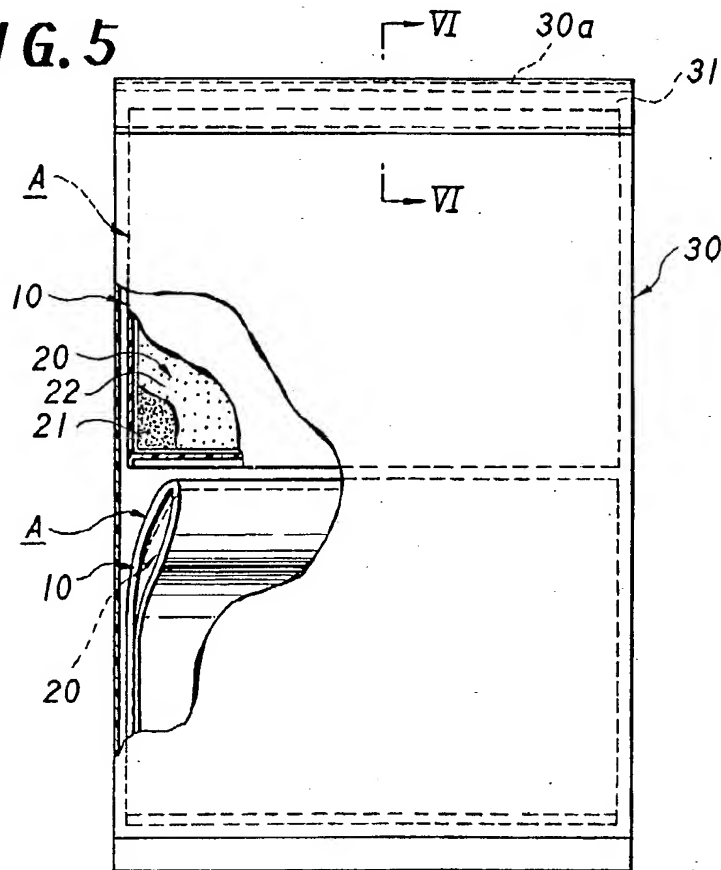


FIG. 6

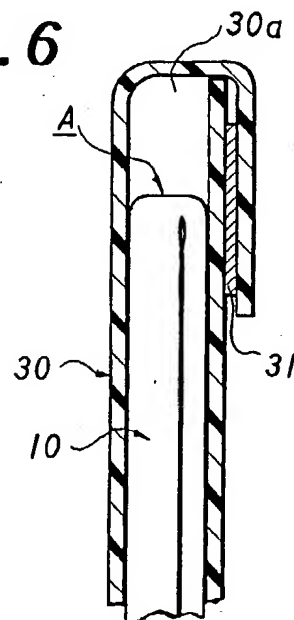
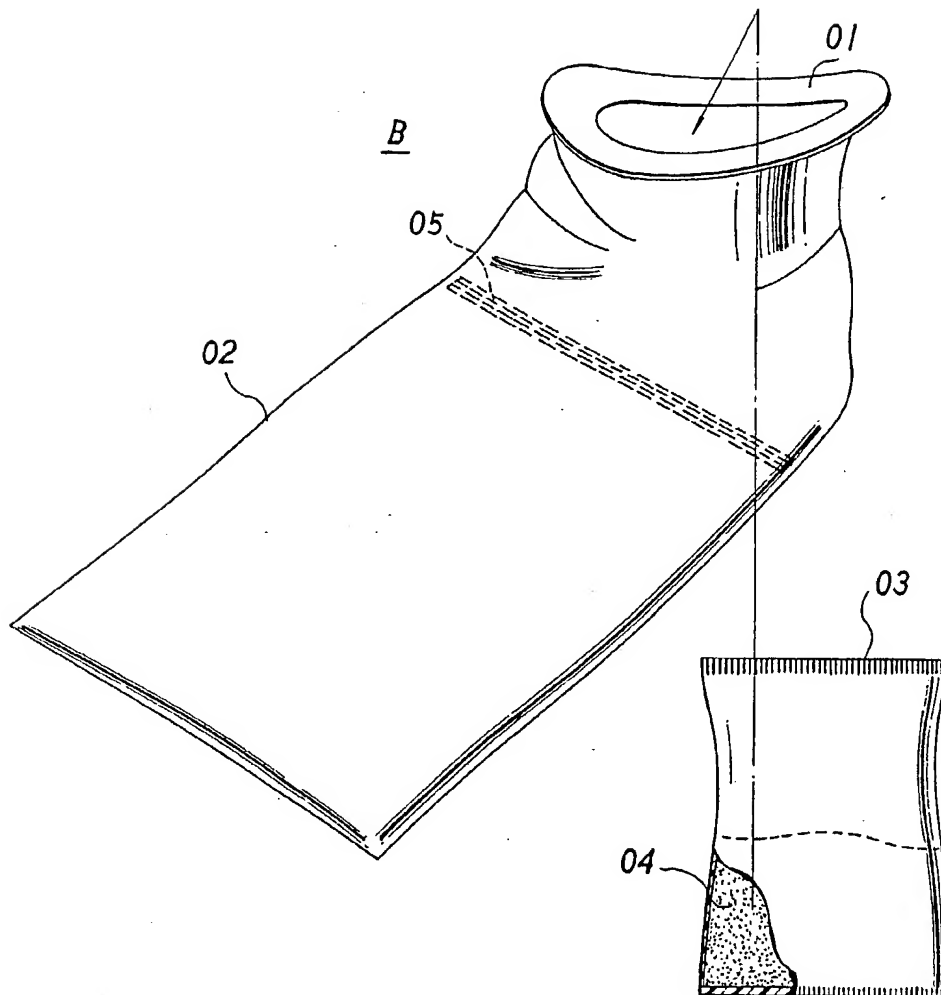


FIG. 7



SPECIFICATION

Portable device for disposing of water retaining excreta

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The present invention relates to a portable device for disposing of water retaining excreta such as urine or vomit.

There is known conventionally a device for
10 disposing of water retaining excreta as shown at B in Figure 7. The device B is for use in disposal of urine. The device B comprises a sheet bag 02 having a receiver 01 disposed at an opening thereof. Designated at 05 is a fastener for closing the opening
15 of the sheet bag 02 after use of the device B and for opening at the time of washing the device B. With such an arrangement, a granular absorbent 04 contained in an absorbent bag 03 is entered from the receiver 01 into the sheet bag 02. The sheet bag 02 is
20 repeatedly usable as a device for disposing of water retaining excreta.

The conventional device B has the shortcomings that the provision of the receiver 01 is not only expensive, but is inconvenient because the device B
25 cannot be compactly folded with thin form and bulk. Moreover, with regard to the operations needed to be performed by the user, the conventional device B has the shortcomings that time and labour need to be spent by the user in introducing the granular
30 absorbent 04 by tearing open the absorbent bag 03, and also need to be spent in washing the sheet bag 02 after the use thereof.

According to the present invention, however, a portable device for disposing of water retaining
35 excreta comprises:

- (a) a water impermeable sheet bag having an end provided with an opening, and the other end closed; and
- (b) a water fixing material previously housed
40 within said sheet bag.

It will be appreciated that, by avoiding the need for a receiver and by already providing the water fixing material in the sheet bag, the portable device of the present invention can be compactly folded with thin
45 form when carried by the user and can be manufactured with low cost, the cost indeed being sufficiently low for the portable device to be disposable thereby avoiding the need for time-consuming and troublesome pre-treatment or
50 after-treatment by the user.

Said sheet bag may be formed of a water impermeable resin (or plastics material) such as polyvinyl chloride. Said sheet bag may be shaped as a rectangle, having initially been shaped as a
55 cylinder with one end being cut to provide the opening and the other end being closed by for example thermal sealing.

Said water fixing material may be formed of a water absorbent and water soluble paper. The water
60 absorbent may be capable of absorbing and fixing water from the water retaining excreta in a jelly-like form and may be polyacrylic acid soda. The water soluble paper may be carboxymethylcellulose and wood pulp.

65 Preferably, the portion of said sheet bag close to its

opening is provided with a closure, and said closure is a releasable fastener including a male portion and a female portion receiving said male portion.

Also preferably, said water fixing material is
70 formed as a rectangle which has been folded in half to fit within that half of said sheet bag by its closed end; said sheet bag has itself been folded in half so that its opening overlies its closed end to form a compact package; and two of said compact
75 packages are housed within a closable bag in such a manner that, when said closable bag has been folded in half to bring an openable end thereof into overlying relationship with a closed end thereof, a respective one of said compact packages is housed
80 within each of said halves of said closable bag to form a compact assembly.

A portable device in accordance with the present invention, and two of the portable devices in a compact assembly with a closable bag, will now be
85 further described, by way of example only, with reference to the accompanying drawings, in which:-

Figure 1 is a front elevational view, partly broken away, of a portable device for disposing of water retaining excreta according to the present invention;

90 *Figure 2* is a cross-sectional view taken along line II-II of *Figure 1*;

Figure 3 is a perspective view of a water fixing member of the portable device;

95 *Figure 4* is an enlarged cross-sectional view taken along line IV-IV of *Figure 3*;

Figure 5 is a front elevational view, partly broken away, of a closable bag containing two of the portable devices;

Figure 6 is a partially cross-sectioned view taken
100 along line VI-VI of *Figure 5*; and

Figure 7 is a perspective view of a conventional portable device for disposing of water retaining excreta.

A portable device A for disposing of water retaining excreta comprises a sheet bag 10 and a
105 water fixing member 20. The sheet bag 10, formed as a rectangle and made of a water impermeable resin sheet, has an end provided with an opening 10a, the other end being thermally sealed. The sheet bag 10
110 is, for example, made of sheet polyvinyl chloride resin. The sheet bag 10 may be formed from a cylindrical body extended longitudinally and cut in the prescribed length. One end of the cut portion is thermally sealed and the other end is opened to form
115 the opening 10a. A closure is provided at the portion close to the opening 10a. The closure is a linear fastener 11 provided at an inner surface of the sheet 10 and composed of a male portion 11a and a female portion 11b for closing the opening 10a.

120 The water fixing member 20 is made of a paper or a cloth including a water absorbent capable of absorbing and fixing water in a jelly-like form. The fixing member 20 according to the present embodiment comprises an absorbent 21 and water
125 soluble papers 22, 22 sandwiching the absorbent 21 therebetween and thereafter the fixing member 20 is folded in two as shown in *Figure 3*. The water absorbent 21 is made of polyacrylic acid soda, the water soluble papers 22, 22 are made of
130 carboxymethylcellulose and wood pulp. The water

fixing member 20 is housed in the bottom half of the sheet bag 10 before use of the portable device A.

To make a compact package, the portable device A is folded in half. Preferably, two of the compact packages are housed in a portable bag 30 having an opening 30a in a manner as shown in Figure 5. The portable bag 30 is then itself folded in two in the same width as that of the water fixing members 20 to thereby form an easily carried compact assembly.

10 The opening 30a of the portable bag 30 has as adhesive 31 applied by the opening 30a to enable repeated closing of the opening 30a.

Operation of this embodiment of the present invention will be described here.

15 The opening 30a of the portable bag 30 is opened to pick up from the portable bag 30 one of the portable devices A. Then, the fastener 11 of the portable device A is released to open and slightly inflate the sheet bag 10 for enabling urine to be passed through the opening 10a. The sheet bag 10 is held in the manner of pushing from outside and widening the sheet bag 10 by one hand which presses against a resilient returning force of the fastener 11 and thereby separates the male portion 11a from the female portion 11b to form a rounded opening through which urine can easily be passed. Then, urine passed from the opening 10a into the sheet bag 10 is fixed like a jelly form by the water fixing member 20. After urine is passed, the portable device A is resealed by closing the fastener 11 and is then thrown away, for example in a wastebasket or other suitable container.

As mentioned above, the portable device A according to the present embodiment comprises a combination of the impermeable sheet bag 10 having the opening 10a and the water fixing member 20 capable of absorbing and fixing water in the water retaining excreta in the form of jelly so that the portable device A is simple to make and use being both inexpensive and compact.

Although the material of the sheet bag 10 is polyvinyl chloride resin, the sheet bag may be another impermeable resin and may not be a resin sheet. The water absorbent 21 and the water soluble paper 22 is not limited to polyacrylic acid soda and carboxymethylcellulose. The fastener 11 may be replaced by a holder, a code or the like, or the opening 10a may be merely closed by hand. Although the portable device A is housed in the portable bag 30, the portable bag 30 is not always required.

The portable device according to the present invention is intended to be used as a urinal for a patient, an aged person, or a handicapped person, or an outdoor urinal for use in an outdoor practice field, a campground, or a baseball ground, or a urinal in a car whilst driving, or as a disposer for vomitted material.

60 CLAIMS

1. A portable device, for disposing of water retaining excreta, comprising:
 - (a) a water impermeable sheet bag having an end provided with an opening, and the other end closed;

and

(b) a water fixing material previously housed within said sheet bag.

2. A portable device according to claim 1, wherein said sheet bag is formed of a water impermeable resin.

3. A portable device according to claim 2, wherein said water impermeable resin is polyvinyl chloride resin.

4. A portable device according to any preceding claim, wherein said sheet bag is shaped as a rectangle.

5. A portable device according to claim 4, wherein said sheet bag was initially shaped as a cylinder.

6. A portable device according to any preceding claim, wherein said water fixing material is formed of a water absorbent and water soluble paper.

7. A portable device according to claim 6, wherein said water absorbent is capable of absorbing and fixing water from the water retaining excreta in a jelly-like form.

8. A portable device according to claim 7, wherein said water absorbent is polyacrylic acid soda.

9. A portable device according to any one of claims 6 to 8, wherein said water soluble paper is carboxymethylcellulose and wood pulp.

10. A portable device according to any preceding claim, wherein the portion of said sheet bag close to its opening is provided with a closure.

11. A portable device according to claim 10, wherein said closure is a releasable fastener including a male portion and a female portion receiving said male portion.

12. A portable device according to any preceding claim, wherein said water fixing material is formed as a rectangle which has been folded in half to fit within that half of said sheet bag by its closed end.

13. A portable device according to claim 12, wherein said sheet bag has itself been folded in half so that its opening overlies its closed end to form a compact package.

14. A portable device according to claim 13, wherein two of said compact packages are housed within a closable bag in such a manner that, when said closable bag has been folded in half to bring an openable end thereof into overlying relationship with a closed end thereof, a respective one of said compact packages is housed within each of said halves of said closable bag to form a compact assembly.

15. A portable device for disposing of water retaining excreta and substantially as hereinbefore described with reference to Figures 1 to 4 of the accompanying drawings.

16. Two portable devices for disposing of water retaining excreta in a compact assembly with a closable bag and substantially as hereinbefore described with reference to Figures 5 and 6 of the accompanying drawings.